

Alg. 2 Warm Up #8-5

1) Write each expression below in simplest radical form.

a. $\sqrt{75} + \sqrt{27}$

b. $\sqrt{x} + 2\sqrt{x}$

c. $(\sqrt{12})^2$

d. $(3\sqrt{12})^2$

2) If $g(x) = x^2 - 5$, find:

a. $g\left(\frac{1}{2}\right)$

b. $g(h+1)$

HW: Green WS

$$2) \quad x^2 - 12x + \underline{36} = -12 + \underline{36}$$

$$\sqrt{(x-6)^2} = \pm\sqrt{24}$$

$$x - 6 = \pm\sqrt{4}\sqrt{6}$$

$$+6 \quad +6$$

$$\boxed{x = 6 \pm 2\sqrt{6}}$$

HW: Green WS

20) $x^4 - 12x^3 + 32x^2$

$x^2(x^2 - 12x + 32)$

$x^2(x-4)(x-8)$

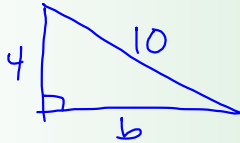
$\begin{matrix} 1 \cdot 32 \\ 2 \cdot 16 \\ 4 \cdot 8 \end{matrix}$

22) $3x^3 - 3x$

$3x(x^2 - 1)$

$3x(x+1)(x-1)$

25)



$4^2 + b^2 = 10^2$

$b^2 = 100 - 16$

$\sqrt{b^2} = \sqrt{84}$

$b = \sqrt{4} \sqrt{21}$

$b = 2\sqrt{21}$

Tan CP's:

Point Slope Form of a line: $y - y_1 = m(x - x_1)$ Where (x_1, y_1) is any point on the line.

Where does it come from?

Why is it powerful?

$$\cancel{(x_2 - x_1)} \frac{y_2 - y_1}{\cancel{(x_2 - x_1)}} = m(x_2 - x_1)$$

$$y - y_1 = m(x - x_1)$$

any pt!
there is only one y-int, but infinite other points!!

Point Slope Form of a line: $y - y_1 = m(x - x_1)$

Example: Write an equation of the line through:

$(-10, 3)$ and $(-2, -5)$

First find slope: $m = \frac{3 + 5}{-10 + 2} = -1$

Now just plug in m , x_1 and y_1

$$y - 3 = -1(x + 10)$$

$$y - 3 = -x - 10$$

$$+3 \quad +3$$

$$y = -x - 7$$

$$y + 5 = -1(x + 2)$$

$$y + 5 = -x - 2$$

$$-5 \quad -5$$

$$y = -x - 7$$

Distance Formula:

$$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

Where does it come from?

$(-4, -2)$ $(6, 2)$

$$\sqrt{d^2} = \sqrt{a^2 + b^2}$$

$$d = \sqrt{(-4 - 6)^2 + (-2 - 2)^2}$$

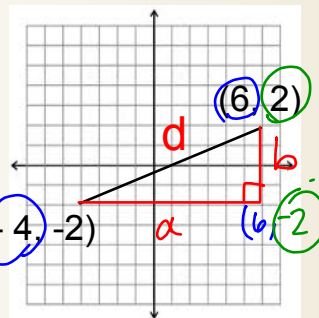
$$= \sqrt{(-10)^2 + (-4)^2}$$

$$= \sqrt{100 + 16}$$

$$= \sqrt{116}$$

$$= \sqrt{4} \sqrt{29}$$

$$d = 2\sqrt{29}$$



* Start each problem thinking of Pyth Th:

$$d = \sqrt{(\quad)^2 + (\quad)^2}$$

Week 8 CP's:

Warm up

2- #64, 66, 67

Blue - Ch. 2

Purple (2- #95 revised)

Salmon (2.2.2/2.2.3)

HW: 2 - #125 ---> 131